

C3
can induce protective immunity, and if adjuvanticity can be separated from toxicity. When recombinant LTB a subunit of HLT, supplemented with a trace amount of recombinant LT was tried intra-nasally as adjuvant for influenza in a human study, the adjuvant effect seemed rather modest, and local undesired side effects were prominent.

On page 13, line 21 replace the third paragraph with the following:

C4
Mucosal vaccines and the adjuvant of beta-1,3/beta-1,6 polysaccharide (glucan) can be administered orally, nasally, rectally, vaginally, through gastric administration or any other means by which the vaccine and adjuvant are allowed to come into contact with mucosal surfaces.

IN THE CLAIMS:

Please substitute the following claim for pending claims 1, 6, 7 and 8, respectively.

D2
C5
1. (Twice amended) A mucosal adjuvant composition that enhances the effect medicinal substances administered onto mucosal surfaces, the mucosal adjuvant composition comprising a branched beta-1,3-glucan that contains beta-1,3-linked side chains anchored by a beta-1,6-linkage to the beta-1,3-linked chains.

D4
C6
6. (Amended) The composition of claim 1 wherein the substance is mixed with the mucosal adjuvant composition.

7. (Amended) The composition of claim 1 wherein the substance is administrated prior to the mucosal adjuvant composition.

8. (Amended) The composition of claim 1 wherein the substance and the mucosal adjuvant composition are intended for administration as a nasal spray.

Please add the following new claims 14-25:

14. The composition of claim 1 wherein the substance is administrated simultaneously with the mucosal adjuvant composition.

D4
15. The composition of claim 1 wherein the substance is administrated after administration of the mucosal adjuvant composition.

16. The composition of claim 1 wherein the substance and the mucosal adjuvant composition are intended for administration as a nasal drops.

C7
17. A mucosal adjuvant composition that enhances the effect of an influenza virus vaccine administered onto mucosal surfaces, the mucosal adjuvant composition comprising glucose monomers linked together in branched beta-1,3 linked chains with beta-1,3,6 linked branching points comprising beta-1,3 linked or beta 1,6 linked side chains.

18. The composition of claim 17 wherein the influenza virus vaccine is administrated into the nasal cavity.

19. The composition of claim 17 wherein the influenza virus vaccine is administrated orally.

20. The composition of claim 17 wherein the influenza virus vaccine is mixed with the mucosal adjuvant preparation.

Sub D7
21. The composition of claim 17 wherein the influenza virus vaccine is administrated prior to the mucosal adjuvant composition.

22. The composition of claim 17 wherein the influenza virus vaccine is administrated simultaneously with the mucosal adjuvant composition.

23. The composition of claim 17 wherein the influenza virus vaccine is administrated after administration of the mucosal adjuvant composition.